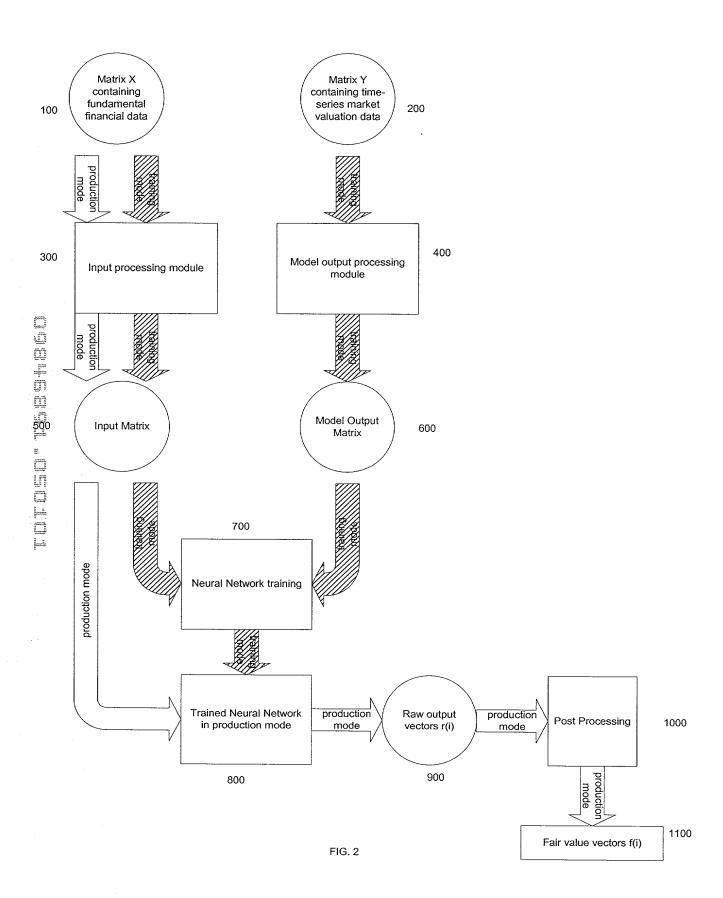


FIG. 1



Companies C_1 , C_2 ... C_T C₁ C_2 C_3 C_T Financial Data D_1 $X_{1,1}$ $X_{2,1}$ $X_{1,2}$ $X_{1,3}$ $X_{1,T}$ Categories X_{2,2} $X_{2,3}$ D_2 $X_{2,T}$ $D_1,\,D_2$ D_3 $X_{3,1}$ $X_{3,2}$ $X_{3,3}$ $X_{3,T}$... D₃₀ D_{30} $X_{30,1}$ $X_{30,T}$

X Matrix 100 (valuation data)

Companies $C_1, C_2 \dots C_T$ C_1 C_2 C₃ C_{T} 200 $\begin{matrix} Y_{t,1} \\ Y_{t-1,1} \end{matrix}$ t $Y_{t,2}$ $Y_{t,3}$ $Y_{t,T} \\$ t-1 $Y_{t\text{-}1,2}$ Y_{t-1,3} $Y_{t-1,T}^{"}$ $Y_{t\text{-}2,1}$ t-2 $Y_{t-2,2}$ $Y_{t-2,3}$

Time Indices t to t-2500

t-2500.

Y Matrix 200 (time-series data)

FIG. 4

1 -2 1 0	-2 5 -4 1	1 -4 6 -4	0 1 -4 6	0 0 1 -4		0 0 0 0
0	0	1	-4	6		0
	•		•	•		•
		•	•	•	•	•
		•		•	•	•
0		6	-4	1	0	0
0		-4	6	-4	1	0
0		1	-4	6	-4	1
0		0	1	-4	5	-2
0	•••	0	0	1	-2	1

A Matrix 610

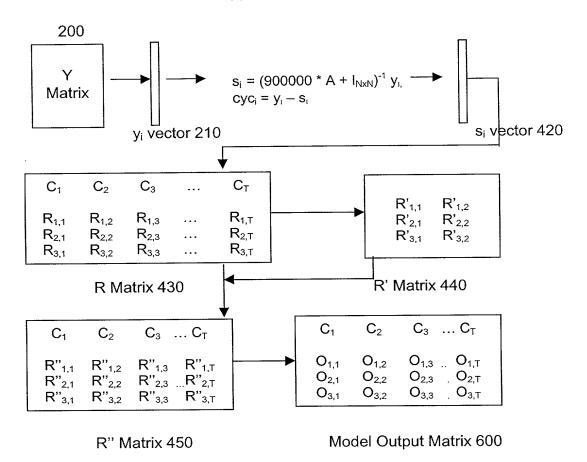


FIG. 5

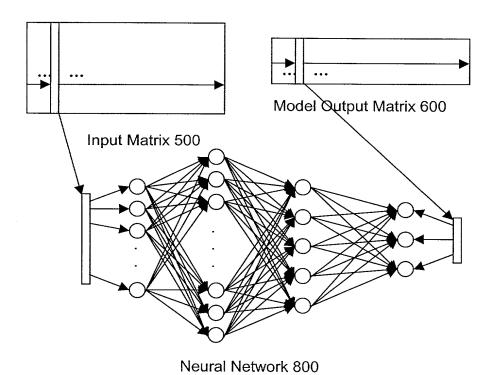


FIG. 6